

Trust in Monetary Authorities and the Business Cycle_4

Dirk Bursian • Ester Faia

How Much Will Your Pension Be Worth? – Introducing a Pension Information Dashboard in Germany_10

Tabea Bucher-Koenen • Andreas Hackethal • Johannes Kasinger • Christine Laudenbach

Virtual Currencies in the Eurosystem: Vigilance and Coordinated Action Needed_14

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About SAFE

The Research Center SAFE – “Sustainable Architecture for Finance in Europe” – is a cooperation of the Center for Financial Studies and Goethe University Frankfurt. It is funded by the LOEWE initiative of the State of Hessen (Landes-Offensive zur Entwicklung wissenschaftlich-ökonomischer Exzellenz). SAFE brings together more than 40 professors and just as many junior researchers who are all dedicated to conducting research in support of a sustainable financial architecture. The Center has two main pillars: excellent research on all important topics related to finance; and policy advice, including the dissemination of relevant research findings to European decision makers from the realms of politics, regulation and administration.

In order to promote a fruitful exchange with interested parties from politics, academia, business and the media, SAFE issues a newsletter on a quarterly basis. This aims to provide an overview of the Center’s ongoing research and policy activities. The SAFE Newsletter succeeds the House of Finance Newsletter, which was published between 2009 and 2012.

SAFE is based at Goethe University’s House of Finance, however extends beyond by drawing on scholars from other parts of Goethe University as well as from fellow research institutions. The Center builds on the reputation of the House of Finance institutions, serving as an interdisciplinary think tank on the issue of finance.

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Editorial



Jan Pieter Krahnén

SAFE Director Research

Odysseus was a far-sighted seaman: when the hero from Greek mythology found himself approaching the island of the Sirens with his ship, he instructed his men to seal their ears with wax. He knew, after all, that the beautiful mythical creatures beguiled sailors with their singing, luring them to the shore where the ships would crash on the cliffs. In order to hear the wondrous singing without succumbing and taking a foolish decision, Odysseus had himself bound to the mast.

Forward thinking is also necessary when dealing with banks that are in difficulties. All too often, national governments heed the Siren calls of banks (and wider society) to use taxpayers' money to prop up failing institutions, as in 2017 with the Italian bank Monte dei Paschi di Siena, for example. The Italian state stepped in with billions of euros to support the bank suffering from bad loans, and today's Italian government seems determined to pursue this policy in future, too. Only recently, Italian Deputy Prime Minister Matteo Salvini made it clear that “if a bank or a company is in trouble, we are here.”

However, the construction of the banking union has a different role for national governments to play: they are integrated into a far-sighted, legal framework intended to hinder them

from acting on immediate political reflex to rescue a failing bank; newly-created authorities take their place and decide on the reorganization and resolution of banks. Often, these agencies are part of the supervisory authorities. As such, the resolution body in Germany today is a department of the Federal Financial Supervisory Authority (BaFin) in Frankfurt.

A government should not be able to easily bypass the national resolution authority to try to save banks on its own: even the expectation that such a circumvention could succeed will negatively influence the disciplining nature of the market and its prices. Only when the state's hands are effectively tied can the new legal order for banks in Europe unfold its regulatory force and bring credible, private liability back into the banking world – an important lesson from the financial crisis.

In Odysseus' case, a simple rope does the job and allows reason to win over emotion. Today's financial world demands much more complicated restraining tactics. Yet one suitable measure would be comparatively easy to implement: a conscious decision to renounce precautionary recapitalization would be simple, but effective. These “recaps” are currently explicitly regulated in the European banking legislation: capital assistance using tax payers' money de facto overrides the newly created resolution and liability rules – and thus counteracts the true achievement of banking regulation.

Abolishing precautionary recapitalization would lead states and politicians to where they should be when it comes to rescuing of credit institutions: like Odysseus, tied to the mast and prevented from making unwise decisions.

Kind regards,
Jan Pieter Krahnén

Trust in Monetary Authorities and the Business Cycle



Dirk Bursian¹
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Ester Faia
Goethe University
& CEPR

Trust is a crucial determinant of economic and financial relations (e.g. Arrow, 1972). For example, in the financial crisis, trust in monetary authorities evaporated, impairing the implementation of monetary policy. Nonetheless, little has been written about the relationship between trust and a country's business cycle or its role in monetary policy. We propose a theoretical monetary model which incorporates trust and shows that the efficacy of monetary policy depends on the ability of the central bank to affect agents' risk attitudes. A decline in trust, caused by shocks or policy actions, increases the overall sensitivity to risk and intensifies the increase in precautionary savings, reducing consumption, and undermining the intended effects of monetary policy. This amplifies the magnitude of the economic contraction, as was demonstrated in the aftermath of the most recent financial crisis.

There is a large body of theory in macroeconomics (e.g. Backus and Drifill, 1985; and King et al.,

2016) on the effect of monetary policy considering the reputation of the monetary authority. Central bankers' reputation has played a crucial role since the 1970s, when central banks' statutes did not prescribe anti-inflationary mandates. Instead, their reputation was largely based on central bankers' preferences.

However, trust is a more complex concept. It also depends on the preferences of economic agents, which vary across agents themselves and also over time, beyond those of the trustee (i.e. the monetary authority). Moreover, we consider uncertainty concerning the behavior of the central bank and not just uncertainty over its type – that is, the institution's mandate. Whereas the type of central bank could be learned over time, trust can disappear due to a crisis, even in the case of a known anti-inflationary central banker. In such situations, the monetary transmission mechanism becomes weaker by increasing the price that agents assign to future contingencies and, therefore, leads to a higher level of precautionary savings, at a time when the monetary authority is trying to stimulate spending.

Trust in the central bank affects the way consumers perceive risk. The more cautious consumers are about the future, the more they will save and the less they will consume. Trust in this model emerges as a result of strategic interactions of economic agents with the monetary authority. It fluctuates over time and is affected by the business cycle. The modelling approach in our study is more general than the existing literature as it combines the traditional monetary models with reputation.

Increase in trust facilitates the monetary transmission mechanism

By adding trust to a standard monetary model, we can account for the link between trust and the policy transmission mechanism. Regarding optimal monetary policy in the model, the central banker has incentives to build trust and promote faster inflation convergence to the target rate. This leads to a reduction in the probability that the central banker will act in an untrustworthy manner: It lowers the probability that the central bank will not follow through with its target. Nonetheless, and contrary to a model where only the reputation of the central bank matters, the

¹ The views expressed here are those of the authors and do not necessarily reflect those of the Deutsche Bundesbank.

policy maker faces a trade-off between such concerns and the need to close a risk gap. This gap is given by variations in the price of future contingencies and affected by deteriorating trust. A policy maker concerned with trust will act less aggressively to meet inflation targets in times of recession, thereby loosening monetary policy.

First and foremost, trust affects consumers' discount factors, hence the extent of precautionary savings. Through this channel, it affects future consumption and inflation expectations. An increase in trust today followed by a decline in

trust tomorrow decreases inflation expectations. First, the agents expect the monetary authority to stay closer to the inflation target. Second, the increase in trust reduces precautionary savings. By increasing the output gap for a given inflation gap, it improves the sacrifice ratio or employment for a given reduction in inflation. Hence, we observe that an increase in trust facilitates the monetary transmission mechanism.

Our empirical analysis suggests that the link between trust, the business cycle, and the mon-

etary transmission mechanism predicted in the theoretical model is consistent with the data. For this analysis, we use data from Eurostat for the macroeconomic variables and the Eurobarometer surveys, which are conducted on behalf of the European Commission, to generate a proxy for trust. To create this proxy, we specifically use the question related to trust in the ECB.

Trust increases confidence and the efficacy of monetary policy expansions

The model can be simulated in response to shocks to productivity, monetary policy, and trust, among other things, to uncover the link between trust and the transmission mechanism. Tracking how a productivity shock affects key macroeconomic variables and the level of trust in the central bank offers a good illustration of the amplification effect generated by including trust in the model.

An increase in technology raises production and consumption demand. The latter increases trust on impact. The endogenous increase in trust is akin to an exuberant reaction to the productivity boom. As trust rises, several effects emerge. First, there is an increase in consumption: agents who are more confident spend more. Second, firms attach a lower price to the risk underlying future profits, thereby boosting output supply. Third, the covariance of the stochastic discount factor with the policy rate increases. The mone-

tary authority has more leeway in affecting future expectations of consumption and inflation. Overall, the boom is amplified and the policy transmission mechanism enhanced.

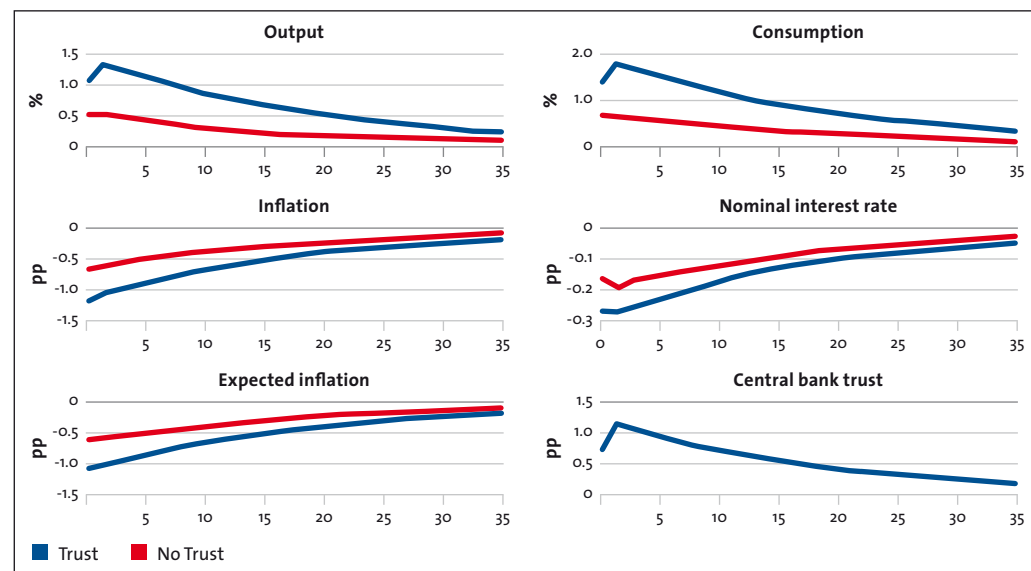
Economic crises tend to revive the idea that trust in large institutions and policymakers is highly sensitive to changes in aggregate conditions. Our monetary model incorporates the endogenous formation of trust in the monetary authority and shows that a decline in trust increases the price that agents attach to future contingencies, amplifies fluctuations, and steepens the sacrifice ratio.

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<http://safe-frankfurt.de/trust-and-business-cycle>



Impulse responses of selected variables to a positive technology shock: Comparing the model with trust (blue line) with one without (red line). The horizontal axes measure quarters. The vertical axes measure deviations from the steady state in percent (%) or percentage points (pp).

The Transmission of Bank Liquidity Shocks: Evidence from House Prices



Özlem Dursun-de Neef
Goethe University

Financial institutions have a vital role in the economy: They provide companies and households with liquidity by supplying loans; they transform maturity, and take risks and distribute them. How do banks react when they are hit by a liquidity shock? Do they transmit these liquidity shocks across markets by a reduction in their loan supply? If so, do these shocks have an impact on the real economy? In this study, I find that bank lending establishes a transmission channel where negative liquidity shocks are transmitted from banks' balance sheets to the real economy, and that holding higher bank capital ratios, higher deposit ratios, and lower short-term debt ratios mitigates the transmission through this channel.

The financial crisis of 2007–2009 led to a systemic shock that affected many banks. Using the financial crisis as a negative liquidity shock on the banks in the US, I analyze how banks react to such a shock and study the transmission of this shock to the real economy.

To identify a variation in the exposure of similar banks to the liquidity shock, I follow Almeida et al. (2011) and use the heterogeneity in the amount of long-term debt that matured right after the onset of the crisis. Although long-term debt is only 10 percent of total assets on average, the amount of long-term debt that matured during the crisis was substantial. For example, the largest bank in my sample with total assets of 1.88 trillion Dollars at the end of 2006 had 20.87 billion Dollars of long-term debt maturing during the crisis – a substantial amount of debt to be rolled over by a bank.

During the crisis, financing costs for long-term debt increased sharply. For example, Citigroup's investment-grade spreads increased from 1 percent in September 2007 to 3 percent in early 2008. The collapse of Lehman Brothers aggravated this effect further to around 7 percent at the end of 2008. Similarly, high-yield spreads, which had been around 3 percent in early 2007, approached 8 percent in early 2008 and reached a level of around 17 percent shortly after September 2008.

As a result, banks with a larger amount of long-term debt that matured during the crisis are expected to be affected more heavily since these banks had to refinance their maturing debt when financing costs were high. In addition, banks did not anticipate the coming crisis when they issued the long-term debt before the end of 2006. When the crisis hit, the amount of long-term debt due during the crisis was an exogenous shock for banks. This makes this specific debt a good proxy to measure the individual bank's exposure to the negative liquidity shock and study the causal effect of this liquidity shock on banks' loan supply.

Sharp increase in financing costs during the crisis

To study the effect of the liquidity shock on banks, I separate supply from demand. Following the approach of Carlson, Shan, and Warusawitharana (2013), I match each bank affected by the liquidity shock with a set of unaffected banks that are located in the same metropolitan statistical area (MSAs); banks in the same location face the same economic environment. The remaining difference in the amount of

loans should then be related to differences in banks' exposure to the liquidity shock during the crisis.

My results show that a bank with a one percentage point higher long-term debt ratio that matured during the crisis decreased its long-term debt by almost 0.04 percent of its total assets. This suggests that banks had a hard time rolling over long-term debt and had to cut

their long-term debt holdings. This could be attributed to the sharp increase in financing costs during the crisis. Further, I can show that a 0.01 percent higher fraction on long-term debt due during the crisis led to a significant reduction in a bank's loan supply by almost 0.09 percent of its total assets. This reduction is particularly strong for real estate loans as compared with consumer loans whereas there is no significant effect on commercial and industrial

loans. This result holds particularly strong for banks with lower deposit ratios and banks with higher short-term debt holdings.

No significant effect on well-capitalized banks' loan supply

I further analyze the transmission of this liquidity shock to the real economy through the reduction in the real estate loans by examining house prices in the MSAs where affected banks have branches. My findings show that an increase of one percentage point in the weighted average fraction of long-term debt that matured during the crisis resulted in a 0.13-percentage-point decrease in the growth rate of house prices.

According to my results, the liquidity shock did not have any significant effect on well-capitalized banks' loan supply, whereas the effect is stronger for under-capitalized banks. An under-capitalized bank with a one-percentage-point increase in its long-term debt ratio that matured during the crisis experienced a reduction in its loan supply of 0.12 percent of its total assets. As a result, the effect of the liquidity shock is

stronger on house prices in the MSAs with more under-capitalized banks relative to MSAs with more well-capitalized banks although the difference is not significant.

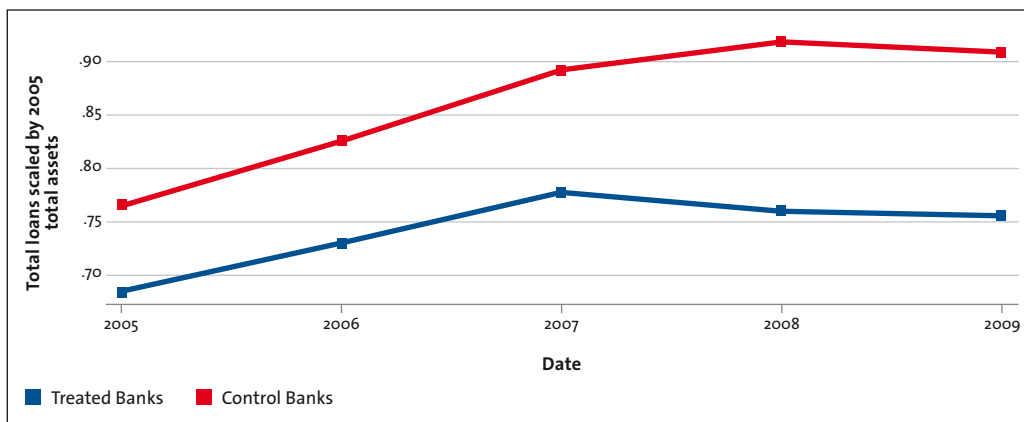
Overall, these results suggest that bank lending establishes a channel where negative liquidity shocks are transmitted from banks' balance sheets to the real economy, and that holding higher bank capital ratios, higher deposit ratios, and lower short-term debt ratios mitigates the transmission through this channel.

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The paper is forthcoming in the Review of Finance and available at: <http://safe-frankfurt.de/bank-liquidity-shocks>



Trends in total loans before and after the financial crisis: This figure shows the trends in total loans before and after the crisis for treated and control banks. Treated banks are the banks with a positive amount of long-term debt that matured during the crisis. Control banks are defined as unaffected neighboring banks that are located in the same MSAs with treated banks. The measure is calculated as the amount of total loans divided by 2005 total assets.

“The Gap between the Rich and Poor has Continued to Widen”



Alfons Weichenrieder
Goethe University
& SAFE

In this interview, Alfons Weichenrieder, Professor of Economics and Public Finance at Goethe University and Member of the Policy Center Core Team at SAFE, talks about the distributional effects of inflation in Europe. Weichenrieder is also a Visiting Professor at the Vienna University of Economics and Business and a member of the Scientific Advisory Board of the German Federal Ministry of Finance.

In your study, you find that price increases tend to put a higher burden on low earners. Why is that?

Households have individual spending budgets and different spending structures. Food, housing, or transport take up a higher proportion of income in poorer households than in wealthier ones. In the last 15 years, however, it is precisely these spending groups which have become more expensive – a development which does not only apply to Germany, but to most other European countries, too.

To what extent do poorer households have the ability to manage their own individual inflation rates by changing their consumption habits?

There is always some space somewhere, but there are good reasons why richer households have more leeway for change: it is harder to avoid essentials than luxury goods.

In your study, you evaluated the years from 2001 to 2015 – a period in which the financial

crisis struck. What role do such extreme events play?

I think that the crisis played a subordinate role in our results. More important than the financial crisis was the rise in the price of food during this time: in 2008 and 2009, food prices rose sharply internationally. The crisis had, if anything, probably a dampening effect on inflation, through rental rates for example.

You studied data from 25 member states of the European Union. As the study shows, the “discriminatory inflation” varies from country to country. Where do those differences come from?

Firstly, our paper shows a clear development: while there are hardly any differences in southern European countries such as Portugal or Italy, countries like Great Britain or Finland were affected particularly strongly. What is striking is that many of the countries with the highest differences in inflation rates are the eastern European countries like Bulgaria or Romania, which also have higher overall

inflation. That is because they still have some catching up on labor productivity. Moreover, if inflation rates are not so high in a relatively stagnant economy such as Italy, then the disparities there are not that high either.

In comparison to the other European countries, where does Germany stand?

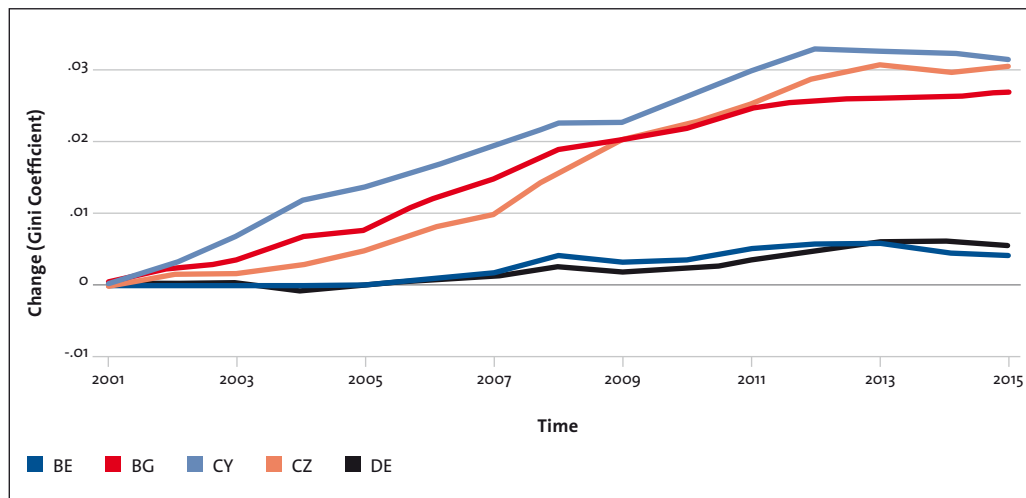
Germany was in the lower mid-field. In the European average, the inflation rate for the poorest 10 percent of the population was 0.7 percentage points higher than for the richest 10 percent. If we look at the average inflation rate of 2.7 percent, we find that this is not negligible; in Germany, the difference was only 0.4 percentage points annually. Nevertheless, we can show in the study that in the German representative sample, the commodity bundle of the poorest 10 percent has risen overall by about 4.5 percent more than that of the richest 10 percent.

The issue of whether inequality is increasing in Germany and Europe is the subject of intense discussion. Do you think that inequality

is underestimated? What contribution does your study make?

One result of our study is that besides the development of measured inequality, there is one element that has been left out of the statistics: especially in Germany, since 2005, the argument has often been made that inequality is not increasing any more – or at least not after redistribution. Nevertheless, there is a strong feeling that the gap continues to widen, and the difference in

price development of the rich and the poor households could be a factor which can, at least partially, explain this perception. Looking at Europe as a whole, it is quite clear that the gap between poor and rich has continued to widen. Even considering the development of incomes after redistribution, the Gini coefficient, which averages 0.3 for our country sample, has increased in average by about 0.02. That is about 7 percent more. For Germany, however, the effects are much lower.



Distributional Effects of Inflation in Europe: The graph shows the purely inflation-related change in the Gini coefficient between 2001 and 2015 in Belgium (BE), Cyprus (CY), Germany (DE), the Czech Republic (CZ) and Bulgaria (BG).

The European Central Bank (ECB) is following a price stability target of below, but close to 2 percent. How reasonable is that policy when the rate of inflation within societies turns out to be so different?

I do not think that the ECB's monetary policy should also pursue redistribution targets. A central bank's chances of influencing the prices of different bundles of goods are also very limited. Perhaps, however, the ECB should consider whether a higher basic rate of inflation might be desirable in a heterogeneous economic area: that is because pay cuts are very difficult to convey; countries with high labor demand could therefore inflate more and open up the potential for regions lagging behind to become more competitive.

How can the state influence “discriminatory inflation”?

The state has influence because of the significant power it exercises over energy prices – for electricity or fuel, for example; political decisions can also make living costs more expensive. Conversely, the state has the ability to lessen the increases in prices in urban

areas through providing better infrastructure or better local transportation to commute, without necessarily building more. One answer might be to use tax revenues from environmental taxes to offer relief to the lower income levels. In the German context, for instance, it would be better to lower sales taxes than to abolish the solidarity surcharge.

What questions does this study throw up for future research?

Inflation does not necessarily have to continue disadvantaging lower-income groups. In this respect, we must analyze price developments for different households in the following years. An interesting approach is to keep thinking about special countermeasures, such as higher transfers for income groups lower down the income scale.

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How Much Will Your Pension Be Worth? – Introducing a Pension Information Dashboard in Germany



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In times of increasing personal responsibility for retirement income and complex retirement planning, our study evaluates the effects of a “pension dashboard” on pension planning and savings behavior. The concept of a dashboard is to present individual claims from all pension pots in one single comprehensible format; a field experiment with several thousand participants was conducted, following which we find that the introduction of a pension dashboard is technically feasible and would offer considerable added value for individuals.

In Germany, as in many other countries, pension reforms have contributed to a shift in responsibility for a sufficient retirement income from the state to the individual level. Income therefore has to be accumulated from public and (potentially multiple) occupational and private pensions, and pension planning thus poses a new and complicated challenge for many households. To ensure a sufficient retirement income, the complex task of collecting and processing information on current pension claims

from different sources is crucial. Previous studies have shown that individuals often have only vague ideas or misguided beliefs about their accumulated retirement savings and thus make mistakes in their saving decisions, putting by too little (or too much) for their retirement.

National pension overviews conceived to support individuals projecting their retirement claims have been or are about to be implemented in several countries, including the Netherlands, Denmark, Sweden, and the United Kingdom. Our study is the first to analyze the influence of the introduction of what is often called a “pension dashboard” (or “pension cockpit”) on individuals’ retirement income perceptions and retirement planning choices in Germany. Several thousand people participated in the field experiment in which we offered them the opportunity to obtain an app-based overview of their future state pension entitlement as well as occupational and private pension schemes with the intention of reducing their information costs, increase pension transparency, and thereby facilitate their pension planning.

Participants were invited to join the study via the websites of two major banks. The partner banks also provided us with pseudonymized account and transaction data on clients participating, allowing us to analyze changes in savings patterns; registered participants then sent all available pension documents to us via the app. Based on the relevant data points from these documents, we computed aggregated pension claims for each user based on actuarial algorithms. Five to ten days after the upload of the documents, participants received their personal dashboard. In addition, we ran three surveys throughout the experiment: before users uploaded their documents, immediately after users examined their personal dashboard, and roughly seven months after the provision of the dashboard. This set-up allowed us to get a coherent picture of individuals’ retirement planning, as well as the need and effects of the introduction of the dashboard.

Extraordinarily high willingness to participate

Our results suggest that the introduction of a pension dashboard offers considerable added

value for individuals in Germany along several dimensions.

First, the extraordinarily high willingness to participate in the study and the answers to the online questionnaires provide evidence that there is considerable interest in, and need for, systematic individual pension transparency. Over 14,000 participants filled out the first questionnaire in the space of just a few weeks: 58 percent indicated that they would like an overview about their pension entitlements, but did not know where they could find it; 66 percent said that they were unable to provide a sound estimate of how much income they would have in retirement.

Second, after accessing the pension dashboard, participants felt better informed about their prospective pensions and tended to regard their pension income situation as better than the control group (see figure). 64 percent of the participants found the dashboard helpful for their retirement planning; most users liked the simple design, some asked for additional information and functions, e.g., the option of

changing the retirement age and seeing its effects on the pension income. A future pension dashboard should therefore offer different layers of information depending on user preferences.

Manual upload of information is an obstacle

Third, the results indicate that even the one-off creation of pension transparency is reason enough for many participants to rethink their pension plans, actively engage in planning, and adjust their savings behavior. Participants with access to the pension dashboard increased

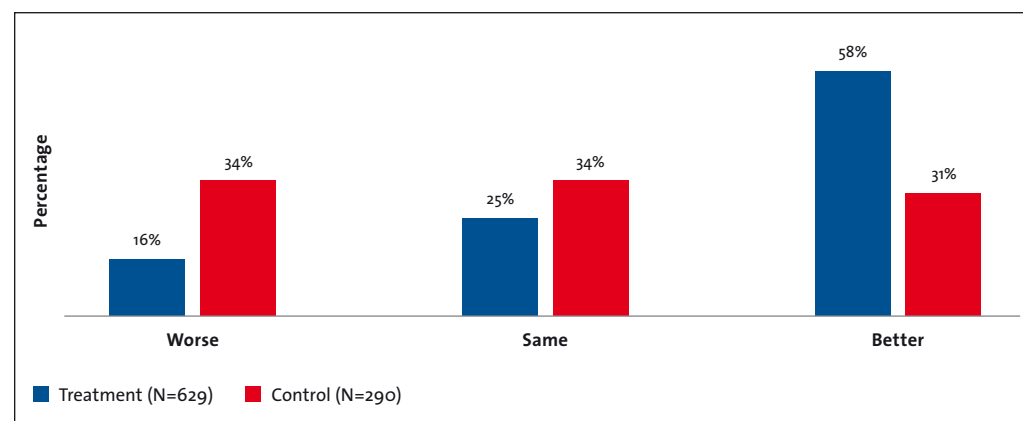
their savings deposits more than individuals with no access and showed a higher likelihood to open new portfolio accounts with the bank. These effects are particularly strong for participants with ex ante lower financial literacy and high a priori uncertainty about their future pension income.

Last but not least, the field study shows that introducing an electronic pension dashboard in Germany is technically feasible. However, for the majority of study participants, the independent search for and the manual upload

of pension notifications represented a considerable obstacle, which led many participants to drop out of the study before completing the upload of all relevant pension documents. Therefore, if pension dashboards are established on a national scale, the automated, electronic provision of contract data from pension providers is a crucial prerequisite.

We use the results of the pilot study as an opportunity to come up with pragmatic answers to remaining technical questions in a next step. For this purpose, the “Deutsche Renten Information e.V.”, an organization which aims to improve transparency in the German pensions system, initiated the project „Prototypentwicklung Rentencockpit“ with well-known partners from academic research and the finance industry. The aim is to develop and test a prototype by the end of 2019 which will, for the first time ever, offer users pension transparency at the click of a mouse.

The full text is available as SAFE White Paper No. 57 at: <http://safe-frankfurt.de/pension-dashboard>



Accumulated pension entitlement: Differences in self reported overview before and 6 months after the study.

News

Barry Eichengreen Appointed Visiting Professor of Financial History 2019



Barry Eichengreen, University of California, Berkeley, will hold the Visiting Professorship of Financial History at the House of Finance next year. He is an Associate at the National Bureau of Economic Research and a Fellow of the Centre for Economic Policy Research. He is well known for his book *Golden Fetters: The Gold Standard and the Great Depression, 1919–1939* (1992) which sees the structurally flawed and poorly managed international gold standard as a main cause for the world depression of the 1930s. Eichengreen's research interests are the history and current operation of the international monetary and financial system and he will hold a workshop and a seminar during his stay in Frankfurt in May 2019. He is the fifth holder of the Goethe University's Visiting Professorship which is endowed by Metzler Bank and Friedrich Flick Förderungsstiftung.

Loriana Pelizzon Appointed as Full Member of the Advisory Scientific Committee of ESRB



Loriana Pelizzon, Program Director of the Systemic Risk Lab at SAFE, has been appointed for the next four years as a full member of the Advisory Scientific Committee (ASC) of the European Systemic Risk Board (ESRB). The ASC advises the ESRB on relevant issues from an academic perspective and currently consists of 15 members. "Her work on sovereign bond markets and systemic risk will greatly contribute to the work of the committee", said Jan Pieter Krahen, Director at SAFE. The ESRB is responsible for the macro-prudential oversight of the EU financial system and the prevention and mitigation of systemic risk.

SAFE/BaFin Conference: Different Perspectives on Resolution Planning

On 26th September, the joint conference organized by SAFE and the German Federal Financial Supervisory Authority (BaFin) brought together different perspectives from authorities, practitioners and academics on the topic of resolution planning. Representing BaFin, Manfred Heemann and Svetlana Dimova pointed out the importance of resolution planning to be prepared for the next crisis. Svetlana Dimova explained that regulators face a trilemma of looking for a solution which is good, quick, and cheap; according to Dimova, this will make banking more complex, but also act as a cleansing mechanism in the industry. Martin Götz, Professor at SAFE, stated that "resolution is not the cure for everything" and emphasized that banks need to be able to fail. Asked whether resolution planning is too complex to work with, his colleague Tobias Tröger answered yes. From his



jurisprudential point of view, with complex resolution plans, the time frame to react in order to prevent losses is too short. Finally, Karen Kuder from Deutsche Bank underlined the importance of a reliable infrastructure and cross-border cooperation for banks to prepare adequately, cautioning that, even if banks become more stable, the amount of preparation which can be implemented is finite. Sven Schelo, lawyer at Linklaters, favored simpler solutions for resolution as they might work better under stress.

Inauguration for Foundations of Law and Finance, Center of Advanced Studies



On 1st November the new Center for Advanced Studies Foundations of Law and Finance led by SAFE Program Directors Rainer Haselmann and Tobias Tröger and funded by the Deutsche Forschungsgemeinschaft (DFG), held its inaugural event with keynote speeches from Martin Hellwig (Director em. of the Max Planck Institute for Research on Collective Goods) and Klaus J. Hopt

(Director em. of the Max Planck Institute for Comparative and International Private Law) about the challenges of interdisciplinary research for lawyers and economists. This center brings together economists, lawyers and political scientists to assess and measure more accurately the impact of norms on the real economy and society. Through cross-disciplinary collaboration the center is aiming to develop discipline-integrating methods, among other goals; both established and next-generation international researchers will work together as part of a fellowship program.

Selected Publications

Baums, T. and C. Teichmann (2018)

“Der European Model Company Act (EMCA).
Inspiration für Gesetzgeber und Wissenschaft
im Kapitalgesellschaftsrecht”,
Die Aktiengesellschaft, Vol. 63, Issue 16, pp. 562-571.

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Virtual Currencies in the Eurosystem: Vigilance and Coordinated Action Needed



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With the growth of what are referred to as “virtual currencies” (VCs) accelerating massively, we explore in a recent in-depth study, commissioned by the European Parliament ECON Committee, the legal and regulatory challenges that entails for the Euro system.

Often, legal analyses start with the question of whether a given VC token is properly regarded as a new type of (digital) commodity, a security, or a currency. The definitions of these legal categories are, however, not always clear, and VCs exacerbate this lack of clarity because they display hybrid features. Therefore, it is preferable to try to understand VCs on the basis of their technical features and economic functions before taking the second step of legal qualification (e.g. as ‘securities’).

First, it is necessary to distinguish between privately issued VCs – such as Bitcoin – and VCs issued by central banks. Privately issued VCs are a species of financial hybrid which defies straightforward placement in established categories: initially a product of a libertarian political project antagonistic towards central banking, VCs harbor technological innovations which may be beneficial to the broader economy and monetary system. As such, most regulators have taken a ‘watch and wait’ approach in order to avoid stifling beneficial innovation. We recommend vigilance and coordinated action at the European level to prevent regulatory arbi-

trage by market participants and a ‘race to the bottom’ by national regulators.

In the long term, these VCs may pose a direct challenge to central banks in their money-creation role. While we do not assess this risk to be credible at the moment, this assessment may change as the evolving technical features of VCs potentially enable the kind of economic function which would compel their legal characterization as ‘money’. Indirectly, VCs could also pose challenges to central banks in their oversight role by creating risks to the stability of the financial system: this could happen if VC markets continue to grow at the current pace and continue to interact with the regulated financial system. This might occur through regulated entities taking part in VC-based activities directly; through unregulated entities offering mainstream financial services via VCs; through regulated entities lending to investors exposed in the VC market; or through regulated entities structuring regulated financial products on underlying VC assets. Further, the unregulated nature of VCs, and the dominance of quasi-anonymous VC schemes, raises challenges in

terms of combatting money laundering, the financing of terrorism, and tax evasion.

What about the VCs issued by central banks? What seems clear is that they could pose problems for the existing monetary system, in particular for commercial banks’ money-creation role. Moreover, the launch of a national VC pegged to the euro (proposed recently and strongly criticized by ECB President Draghi) would be contrary to the legal framework of the Euro system. The notion of an “e-Euro” and the distribution of competence within the monetary union is an interesting space to watch, as the architecture of the Euro system attenuates the link between political sovereignty, fiscal authority, and money creation to an unprecedented extent.

Just as the law follows technological innovations (which make new forms of economic behavior possible), regulation tends to follow, rather than avert, crises. Pro-active and coordinated activity at the European level seems to be highly desirable in the face of developments in VCs, even if no immediate, direct threat to central banks’ seems credible at the moment.

Events

December

- 3 December **EFL Jour Fixe**
Distributed Ledger Systems for Micropayments in IoT Environments
Speaker: Amr Rizk, E-Finance Lab
- 4 December **Frankfurt Macro Seminar – Joint with SAFE**
Predicting Consumer Default: A Deep Learning Approach
Speaker: Stefania Albanesi, University of Pittsburgh
- 4 December **Finance Seminar – Joint with SAFE**
Speaker: Susan Christoffersen, Rotman School of Management, University of Toronto
- 5 December **Finance Brown Bag Seminar**
How Mandatory Guarantees Shape Saving and Retiree Wellbeing: The Case of German Riester Pension Accounts
Speaker: Daniel Liebler, Goethe University
- 10 December **CFS Lecture**
Agilität in Finanzdienstleistern erfolgreich einführen – Überblick und Praxisimpressionen aus der digitalen Transformation
Speaker: Dr. Gerd Gouverneur, Commerzbank AG; Patrick Pähler, TCI Consult GmbH
- 11 December **Frankfurt Macro Seminar**
Speaker: Leo Kaas, Goethe University
- 11 December **Finance Seminar – Joint with SAFE**
Speaker: Christopher Hennessy, London Business School

- 13 December **SAFE Annual Conference on Sustainable Architecture for Finance**
Where Are We Now and Where Are We Going?
- 14 December **SAFE Conference**
6th Frankfurt Conference on Financial Market Policy : “European Financial Markets – Too Much Variety?”
- 18 December **Frankfurt Macro Seminar**
Speaker: Piero Gottardi, European University Institute, Florence

January

- 15 January **Finance Seminar – Joint with SAFE**
Speaker: Marcin Kacperczyk, Imperial College London Business School
- 21 January **SAFE Policy Lecture**
The Economics of China’s New Era
Speaker: Justin Yifu Lin, Peking University
- 22 January **Frankfurt Macro Seminar – Joint with SAFE**
Speaker: Alexander Meyer-Gohde, Goethe University
- 23 January **Finance Brown Bag Seminar**
Speaker: Özlem Dursun-de Neef, Goethe University
- 29 January **Frankfurt Macro Seminar – Joint with SAFE**
Speaker: Ayhan Kose, World Bank

February

- 5 February **Frankfurt Macro Seminar – Joint with SAFE**
Speaker: Gian Luca Clementi, New York University
- 5 February **Finance Seminar – Joint with SAFE**
Firm Demographics and the Great Recession
Speaker: Kaveh Majlesi, Lund University
- 7 February **SAFE Policy Lecture**
Speaker: Burkhard Balz, Deutsche Bundesbank
- 7 February **Money and Finance Brown Bag Seminar**
Wealth, Information Acquisition, and Optimal Consumption-saving Behavior
Speaker: Penghui Yin, GSEFM
- 12 February **Frankfurt Macro Seminar – Joint with SAFE**
Speaker: Petr Sedlacek, University of Oxford

March

- 19 – 20 March **GBS Roadshow**
Global Insurance Tech Roadshow



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